

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231*AK*

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

09/441,639 11/16/99 CHEN

W TI-29646

023494 MMC2/1025
TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS TX 75265

EXAMINER

CHOE, H

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2817 *J*

DATE MAILED:

10/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

023494 HMC2/1025
TEXAS INSTRUMENTS INCORPORATED
P O BOX 656474, M/S 2899
DALLAS TX 75265

| APPLICATION NO. | FILING DATE | TOTAL CLAIMS | EXAMINER AND GROUP ART UNIT | DATE MAILED |
|-----------------------------|-------------|---------------------------|-----------------------------|---------------|
| 09/441,619 | 11/16/99 | 020 | CHUE, H | 2817 10/25/00 |
| First Named Applicant CHEN, | | 35 USC 154(b) term ext. = | 0 Days. | |

TITLE OF INVENTION/DILUTION SCHEME FOR FILTERLESS SWITCHING AMPLIFIERS

| ATTY'S DOCKET NO. | CLASS SUBCLASS | BATCH NO. | APPLN. TYPE | SMALL ENTITY | FEES DUE | DATE DUE |
|-------------------|----------------|-----------|-------------|--------------|-----------|----------|
| 2 TJ-29646 | 330-010.000 | U22 | UTILITY | NO | \$1240.00 | 01/25/01 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

If the SMALL ENTITY is shown as NO:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

A. Pay FEE DUE shown above, or

B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

- II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

- III. All communications regarding this application must give application number and batch number.

Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

| | | |
|-------------------------------|--------------------------------------|------------------------------------|
| Notice of Allowability | Application No. 09/441,619 | Applicant(s) Chen et al. |
| | Examiner Henry Choe | Group Art Unit 2817 |



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

- This communication is responsive to the application filed on 11/16/99
- The allowed claim(s) is/are 1-20
- The drawings filed on _____ are acceptable.
- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All Some* None of the CERTIFIED copies of the priority documents have been
- received.
 - received in Application No. (Series Code/Serial Number) _____.
 - received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- *Certified copies not received: _____
- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- Applicant MUST submit NEW FORMAL DRAWINGS
- because the originally filed drawings were declared by applicant to be informal.
 - including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 2.
 - including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.
 - including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

- Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- Notice of References Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152
- Interview Summary, PTO-413
- Examiner's Amendment/Comment
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- Examiner's Statement of Reasons for Allowance

Art Unit:

DETAILED ACTION

Reasons for Allowance

1. 1-20 are allowed.
2. The following is an examiner's statement of reasons for allowance: Regarding claims 1 and 11, the closest prior art of record, Figure 1 or Figure 2 discloses a switching amplifier comprising a first switch (mp1), a second switch (mn1), a third switch (mp2), a fourth switch (mn2) wherein each transistor having a respective control terminal (gate of each respective transistor), a first output terminal (OUTP) which is disposed between the first switch (mp1) and the second switch (mn1), and a second output terminal (OUTN) which is disposed between the third switch (mp2) and the fourth switch (mn2). As described above, Figure 1 or Figure 2 discloses all the limitations in the claims except for that the control circuit coupled to the four switches such that no voltage differential is generated between the first output terminal (OUTP) and the second output terminal (OUTN) in a first state of operation (Figure 5 or Figure 6 of drawing describes the first state of operation). This unique functional limitation is not taught or suggested by prior art or in combination of other references.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit:

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

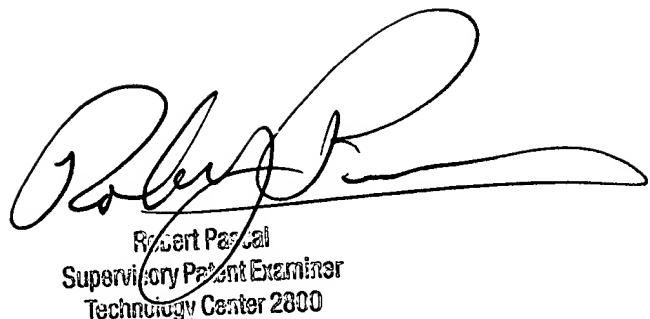
Patent numbers (6,028,476; 6,034,565; 6,016,075; 4,554,512; 4,673,889) are the switching amplifiers.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (703) 305-0576.

Art Unit:

H C #266

October 23, 2000



A handwritten signature in black ink, appearing to read "Robert Pascal".

Robert Pascal
Supervisory Patent Examiner
Technology Center 2800



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NUMBER | FILING/RECEIPT DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NO./TITLE |
|--------------------|---------------------|-----------------------|---------------------------|
| 09/441619 | 11/16/99 | Chen | TI-29646 |

Application Number:

Attachment to Paper Number:

NOTICE OF INFORMAL APPLICATION

This application is considered to be informal since it does not comply with the regulations for the reason(s) indicated below. The period within which to correct the informalities noted below and avoid abandonment is set in the accompanying Office action.

A. A new oath or declaration, identifying this application by the application number is required. The oath or declaration does not comply with 37 CFR 1.63 in that it:

- 1. does not identify the residence (e.g., city and either state or foreign country) of each inventor.
- 2. does not identify each inventor by full name, including the family name and at least one given name without abbreviation.
- 3. does not identify the complete post office address of each inventor.
- 4. does not identify the citizenship of each inventor.
- 5. does not state whether the inventor is a sole or joint inventor.
- 6. does not state that the person making the oath or declaration:
 - has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration.
 - believes the named inventor or inventors to be the original and the first inventor or inventors of the subject matter which is claimed and for which a patent is sought.
 - acknowledges the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.
- 7. does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month, and year of its filing.
- 8. does not state that the person making the oath or declaration acknowledges the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application which discloses and claims subject matter in addition to that disclosed in the prior application (37 CFR 1.63(e)).
- 9. contains non-initialed alterations (37 CFR 1.52(c)).

B. Applicant is required to provide:

- 1. Proof of authority of the legal representative under 37 CFR 1.44.
- 2. An abstract in compliance with 37 CFR 1.72(b).

C. OTHER: _____

